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Environment Agency

Traditional regulation has achieved much. But the nature of regulation has to change to keep pace with changes in the economy and society. We are further developing our approach to regulation to improve and protect the environment. This approach is focused on outcomes and is risk-based. We communicate it clearly and consistently. We call this ‘modern regulation’ and this booklet explains what it means and why it will make a difference.

Delivering for the environment

A 21st Century approach to regulation

“Modern regulation aims to find the right balance – a proportionate, risk-based response, that will drive environmental improvements, reward good performance, but still provide the ultimate reassurance that tough action will be taken on those who fail to meet acceptable standards.”

Contents

Foreword

The UK has a history of leading the way in environmental regulation. The introduction of Britain’s first Alkali Act in 1863 laid the foundation of a pollution control regime that was to be replicated by many other industrial nations. The Clean Air Acts put paid to the deadly smogs of the 1940s and 1950s. Since then the benefits of regulation have continued to be experienced, decade on decade, in cleaner and healthier air, land and water.

As times have changed, regulation has modernised too. Dialogue and joint problem solving, and the ‘carrots’ of incentive and reward are increasingly being used to supplement or replace the traditional ‘stick’ approach. Modern regulatory thinking has developed a wider and smarter range of tools than ever before – to include taxes, trading schemes, voluntary agreements and environmental management systems.

Twenty-first century consumers demand sophistication and choice, and expect products and services to be delivered responsibly and safely. Businesses do not want regulation to impinge on their ability to innovate and grow. Modern regulation aims to find the right balance – a proportionate, risk-based response, that will drive environmental improvements, reward good performance, but still provide the ultimate reassurance that tough action will be taken on those who fail to meet acceptable standards.

As promised in last year’s discussion document we have carefully considered the many comments received from our stakeholders. These have been enormously encouraging. Welcoming our overall approach and complementing the succinct style. Areas we have strengthened following your comments include sustainability and competitiveness, together with more examples of our modern regulatory approach in practice, i.e. how we walk the talk.

There is much we still need to do to reach the demanding, better regulation goals we have set ourselves but already we have achieved much. We have carried out a major reorganisation, introduced risk-based approaches for measuring performance, resource allocation and charging in many business sectors and will be rolling them out to more. We have a number of trading schemes in train instead of traditional permitting and have developed more efficient tools across the range of our activities – the benefits of which will progressively work their way through to those we regulate.

Barbara Young
Chief Executive, Environment Agency

Principles of modern regulation

Traditional regulation has achieved much. But the nature of regulation has to change to keep pace with changes in the economy and society. We are further developing our approach to regulation to improve and protect the environment. Our approach is outcome-focused and risk-based, clearly communicated and is delivered in a consistent manner.

We call this 'modern regulation' and this booklet explains what it means and why it will make a difference. We are already doing some of this, some we are working towards and some we want to see developed.

Modern regulation focuses on outcomes. These include preventing or minimising environmental impacts and achieving high standards of environmental management.

Society demands high environmental standards and expects companies and individuals to behave responsibly. Modern regulation means complying with and even exceeding legal requirements without constant supervision and the threat of enforcement action. The business world rightly expects greater regulatory efficiency, minimising bureaucracy, to keep compliance costs to a minimum.

These potentially conflicting demands can be met with a regulatory regime that helps business and individuals to improve, rewards good performers but is tough on those who do not meet acceptable standards.

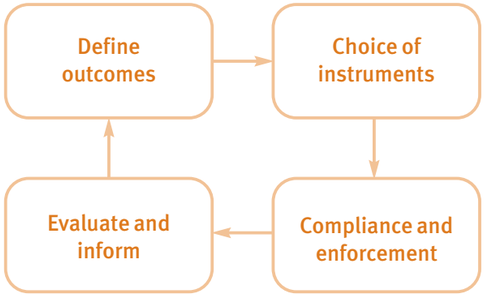
Direct regulation of the kind which has traditionally controlled abstractions from, and emissions to the environment will continue to have an important role – but will become smarter by using risk-based approaches, greater standardisation and associated charging mechanisms. But other instruments also need to be used where they are more appropriate, including environmental taxes, trading schemes, negotiated agreements and education programmes.

Any modern regulatory regime must meet the five principles set out by the Better Regulation Taskforce. It must be:

- **transparent** – we must have rules and processes which are clear to those in businesses and local communities
- **accountable** – we must explain ourselves and our performance
- **consistent** – we must apply the same approach within and between sectors and over time
- **proportionate** (or risk-based) – we must allocate resources according to the risks involved and the scale of outcomes which can be achieved
- **targeted (or outcome-focused)** – the environmental outcome must be central to our planning and in assessing our performance.

We also believe regulations must be practicable. The regulators need to be funded to let them do their job and it must be clear to businesses what they have to do.

“Potentially conflicting demands can be met with a regulatory regime that helps business and individuals to improve, rewards good performers but is tough on those who do not meet acceptable standards.”



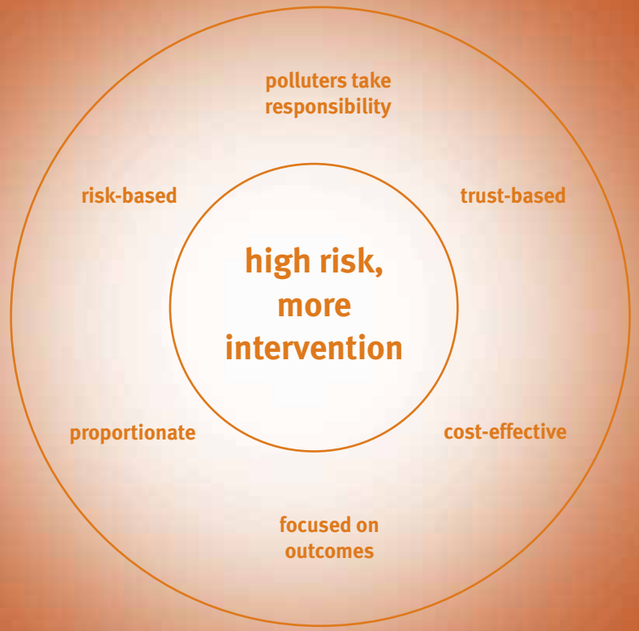
We believe the modern regulatory model is made up of four segments.

- **Define outcomes** – based on legislative and policy drivers, environmental needs and best practice, taking into account specific sector and geographical circumstances, together with scientific understanding.
- **Choice of instruments** – sometimes in combination, based on the nature of the environmental impacts and the risks. We will work with government to inform its decision-making process.
- **Compliance and enforcement** – operators are responsible for complying with laws and regulations. We will concentrate our resources where the risks are highest, including the highest hazards and the poorest performing operators, and focus on the management systems which underpin the operator's performance. We will also monitor performance – including specifying performance standards and ensuring that operators are using appropriate monitoring systems and techniques. We will take action where operators do not meet their environmental responsibility, using a firm and fair approach including enforcement and prosecution where necessary.
- **Evaluate and inform** – assessing how well the desired environmental outcomes and management performance are being delivered. Experience gained will be used to inform the development of new legislation where appropriate. We will make information on the environmental performance of business and our performance as a regulator widely available. Transparency and trust are vital aspects of our relationship with local communities and society as a whole.

There are important implications for all involved in the regulatory process:

- legislators need to be smart in devising laws and use the full range of policy instruments which will achieve their aims while allowing flexibility in the regulator's approach
- businesses and individuals need to take full responsibility for compliance
- regulators need to use the flexibility allowed by the legislative framework to deliver the required environmental objectives efficiently and effectively.

What modern regulation looks like



low risk, less intervention

What regulation has achieved

Direct regulation – issuing a permit and checking compliance on a continuing basis – is an important process which will continue to deliver key environmental objectives, as it has done for more than a century.

The first Alkali Act was passed in 1863; London's smogs were beaten by regulation requiring smokeless fuel. In recent times most of the significant polluters, in industries such as chemicals, power generation and waste management, have been regulated through permit regimes, which set limits and impose operating requirements site by site. Since 1963, most of the significant abstractions from surface water and groundwater have been regulated to make sure that users have the water they need without damaging the environment.

This approach has clearly contributed to dramatic environmental improvements.

- Since 1990, sulphur dioxide emissions to air have fallen by 75%, nitrogen oxides by 52%.
- Water pollution (measured by biochemical oxygen demand) fell by 65% in the five years to 2001.
- Environmental incidents fell by 30% between 1997 and 2000.

The Environment Agency is responsible for more than 1,600 authorisations in process industries, more than 100,000 consents to discharge to inland waterways and more than 7,500 waste management licences. The Pollution Prevention and Control regime will extend integrated regulation to the food and drink sector (2004/5) and intensive pig and poultry farming (2006). In addition, we manage 49,000 water abstraction licences ranging from those for water companies to individuals.

Direct regulation will remain a fundamental part of our framework. While this framework is particularly appropriate for relatively small numbers of point source emissions we need other approaches where impacts are caused from diffuse sources or large numbers of small sources, which cumulatively have a significant impact.

For example, the agricultural industry includes approximately 150,000 farms of which many are small or micro businesses. Individually their environmental impact may be minimal, however the cumulative impact is significant. Advice and voluntary agreements figure strongly alongside direct regulation to this sector. ■

We also know, in the light of experience, that in some situations other regulatory instruments could deliver some of the same outcomes as direct regulation, but with greater flexibility thus stimulating innovation and more cost-effective solutions.

Competing demands

There are widely differing views on the need for and value of environmental regulation. At one end of the spectrum, many environmental campaigners and local communities want to see tough controls on all hazardous activities to provide the maximum protection against damage to the environment and human health. At the other end are those who warn of unnecessary red tape interfering with individual liberty and business competitiveness.

Between these extremes is a range of views which reflect different attitudes towards risk and the value of effective regulation. It is undeniable, however, that society as a whole increasingly demands higher environmental standards. This is true not only in the UK but also throughout the developed world, where a good environment is a key element in providing the expected quality of life. Indeed, the ability of economic activity to deliver a high quality of life now without compromising the future is central to the concept of sustainable development. Maintaining the circle of trust between the regulated, the public and the regulator is key to balancing the range of differing views.

In the UK, government, over the next few years, will introduce a number of new laws placing enforcement duties on the Environment Agency. It is important that the Department for Environment, Food and Rural Affairs (Defra) and the Environment Agency are smart about how these are implemented.

Otherwise we would need a significant increase in the number of inspectors and industry would face significant increases in costs and regulatory load.

But a high-quality environment is the responsibility of everyone, not just a matter for government to mandate and regulators to enforce. Individuals have responsibilities to use energy and other resources efficiently, keep waste to a minimum and recycle.

Similarly, modern thinking on corporate responsibility encourages businesses to go beyond the minimum necessary to comply with the law. Businesses, big and small, are expected to proactively reduce their environmental impacts, from sourcing materials to disposing of their products. They are also expected to apply the same environmental and safety standards wherever they operate, rather than moving production to countries where they can operate to lower standards, but where the environment would suffer.

Competing demands

‘ Modern thinking on corporate responsibility encourages businesses to go beyond the minimum necessary to comply with the law. Businesses are expected to proactively reduce their environmental impacts. ’

There are business benefits in acting responsibly, from cost savings through resource efficiency to improved reputation and employee motivation.

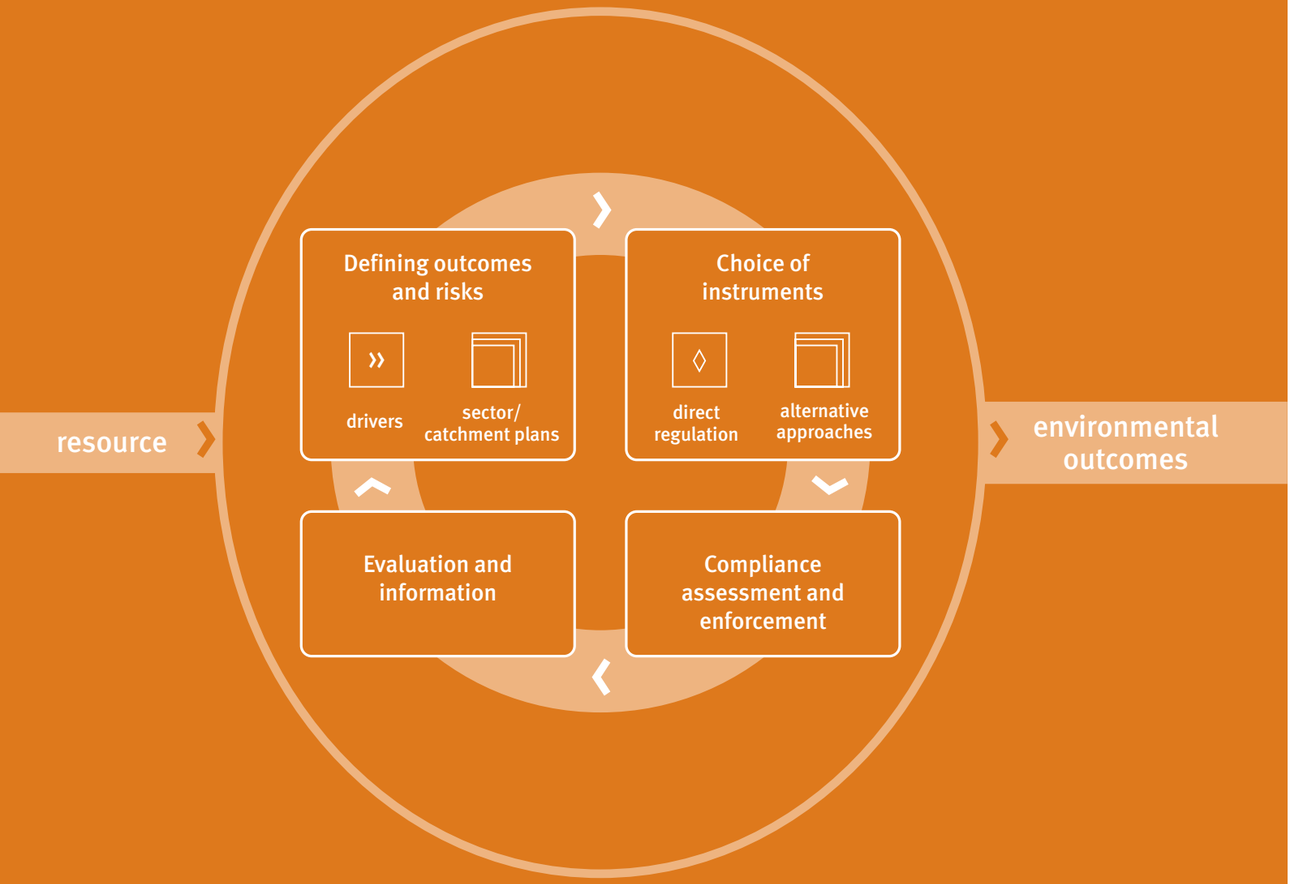
For example, a yarn dyeing operation, has saved over £100,000 from a range of resource efficiency measures that have brought significant environmental benefits including reduced chemical oxygen demand of effluent, reductions in solid waste and energy savings. ■

Businesses that have good environmental performance can earn a lighter regulatory touch. We aim to reflect this in our charging structures for environmental protection. In England and Wales it is Government policy that the cost of regulation should be borne by the regulated. We have introduced schemes in some areas of our work where the charges reflect the risk and therefore the regulatory effort involved.

Getting regulation right in the twenty-first century means getting the right balance between:

- providing risk-based, outcome-focused, cost-effective regulation to protect the environment and human health
- not imposing unnecessary administrative burden on regulated businesses
- ensuring the public retains confidence in the Environment Agency as an effective regulator.

Our model of modern regulation



Our model of modern regulation

Meeting the principles of modern regulation requires a smarter approach throughout the process, from developing new laws to implementing and evaluating them. In this section we describe the components that lie at the heart of modern regulation: • Defining outcomes and risks • Choice of instruments • Compliance assessment and enforcement • Evaluation and the provision of information.

Our model of modern regulation

Defining outcomes and risks

There are three sets of drivers involved in defining outcomes and risks.

- **Environmental needs and sustainable development** – such as clean air and water, in the context of an appropriate geographical scale, for example, Air Quality Management Plans and Catchment Abstraction Management Strategies. Tools such as environmental impact assessments contribute to our knowledge of environmental needs.
- **Legislation and policy** – national and international legislation and policy objectives, together with environmental standards and emission limit values (for example, in the Waste Incineration Directive).
- **Best practice and sound science** – including reducing bureaucracy, experience from other countries, life cycle analysis, integrated product policy, best available techniques and working with other agencies.

Adapting regulation in a geographical context

The Water Framework Directive (WFD) confirms use of the river catchment area as the basis of environmental management. At the level of the catchment we can look across the ecological and physical links in the environment and we can see how a broad spectrum of businesses and communities interact. This allows us to understand the physical and biological activities in the environment, and the social and economic pressures on it as well as looking at individual activities or sources of pollution. From that better understanding, we can design better management approaches.

We already use this approach to develop Catchment Abstraction Management Strategies, which set the framework for managing water resources across the country. Similarly, Catchment Flood Management Plans and Flood Strategies look across large geographic areas to plan flood defences that work with the physical characteristic of catchments.

The ‘catchment’ approach to regulation can be usefully extended to some air-quality issues, especially where the sources and receptors of air pollutants are geographically well-defined. Some receptors are remote from the sources of pollution and pollution entering a ‘catchment’ can even originate in other countries. Air Quality Management Plans are used to address emissions not only from industry but from other sources such as transport.

The Environment Agency is also developing sector plans, which address the specific environmental issues associated with particular sectors. Not a one size fits all approach. But an approach which allows us to address specific sector issues, and prioritise the regulatory workload between and within sectors. Sector plans will relate to a coherent, recognisable target group and define the outcomes and risks that we will address for that group. The sector may be a particular industry, such as agriculture or nuclear, or a recreational sector such as angling.

Our model of modern regulation

Choice of instruments

In many cases the instrument will be set down in legislation and we will work with government to inform its choice of the most appropriate approach. A suite of complementary instruments is available, from education to site-specific permits, as illustrated in the diagram opposite. Once we are clear about the outcomes we are aiming for and the risks involved, we can look for the most effective approach to achieve the environmental objective with the most efficient use of resources.

Each of these approaches can have a role to play as described later in this section.

In some situations the best way of achieving the desired outcome is to use a combination of instruments, for example in the approach the Environment Agency would like to see adopted for power station emissions.

A smarter approach to power station emissions

We have traditionally used direct regulation to control pollution from power stations. We will continue to do so to protect local water, land and air quality, to deal with waste disposal, water and energy use minimisation, as well as to avoid accidents, noise and odours. But we believe the overall control of some pollutants may be delivered more cost-effectively by using additional approaches. For instance, the long-range effects of oxides of nitrogen (NOx) emissions could be controlled by introducing an overall ‘cap’ on mass emissions from major sources such as power stations, together with an emissions trading system to provide flexibility in how the power stations meet the cap. Power station emissions contribute about 20 per cent of the UK total levels of NOx. Trading could deliver the overall reductions in NOx in a more cost-effective way than direct regulation alone although direct regulation would be used in combination to deliver protection of the local environment.

Regulation of agriculture

The agricultural sector highlights the way different approaches already exist. A farm for example may hold, a permit to discharge to groundwater, a registration for a low risk radioactive sealed source (combined harvester), and various responsibilities where the requirements are written directly into the legislation for example, the requirements for nitrate vulnerable zones. Specific educational tools and guidance notes are provided, for

The different regulatory approaches

Choice of instruments
Continued

example, pollution prevention guidance (PPGs) notes codes of good agricultural practice. The agricultural community also uses voluntary initiatives, for example, the agreement on the use of pesticides. ■

Direct regulation

This is the traditional approach to controlling emissions or abstractions with rules specifying what a company can and cannot do. It is clearly the responsibility of operators to ensure they comply with all regulatory requirements.

Permits

We use a spectrum of tools for direct regulation. These range from directly applying the legislation to bespoke permits. We match our response to the level of environmental risk and the complexity of the targeted activity. The fundamental principle is that we use the tool which requires the least resource to achieve the relevant environmental objectives.

The various options give rise to different degrees of control and implementation costs, and are suitable for different levels of risk. Where there is higher risk or site-specific requirements, bespoke permits may be required, whilst for lower risks, the legislation can be applied directly without permits or registrations. Greater resources are required to administer bespoke permitting systems.

Bespoke permits These are used typically for complex activities, for unique processes and where there are site-specific requirements. However, we will even standardise bespoke permits as far as possible to minimise unnecessary effort. In many situations the improvement programme will be the most site-specific aspect.

Standard permits In many sectors the activities are sufficiently similar to warrant completely standard permits. Improvements in performance will be delivered by sector-wide improvement programmes.

Registrations The rules to be adhered to can be laid down in legislation or in a set of requirements published by the regulator. The requirements can be enforced just as if they had a permit. Those carrying out a particular activity can then register their details with the regulator, for example, who they are and where the activity is located. An annual renewal and charging system is required.

Directly applying the legislation
In some cases it is not even necessary to have a permit or registration for example, nitrate vulnerable zones are defined in legislation. This applies where the rules for the activities can be simply defined and/or the risks are low. We need to work with government as an advisor to consider in any situation whether such an approach can produce the required level of environmental protection.

› For example, the Water Act will no longer require permits to be held by water abstractors taking less than 20 cubic metres of water per day. ■

Direct regulation may be required to underpin other instruments such as trading and voluntary agreements to ensure that participants at least meet a minimum level of performance, in effect a backstop to prevent free riders. Trading schemes also require regulatory regimes to describe and prescribe the boundaries and mechanisms of operation.

Our approach to permitting

We will standardise as far as possible to deliver consistency as well as minimising the time required to process applications.

When we attach conditions to a permit, we focus them as far as possible on the environmental outcomes we are aiming for, and set them at as high a level as possible rather than making detailed prescriptions. While we maintain appropriate scrutiny, operators are responsible for compliance. We encourage the use of management systems to monitor and report performance and ensure conformity with the permit conditions.

We are also moving to a position where the charges we apply for a regulatory regime better reflect the level of resources we need to expend on a particular site. Operators with better controls and performance will be charged less than those whom require more of our resources.

We review permits periodically to make sure they remain protective of the environment.

> “The fundamental principle is that we use the type of permit which requires the least resource to achieve the relevant environmental objectives.”

+ Advantages

- Permits can address individual and local need for resources, such as abstraction licences.
- They clearly set out minimum requirements.
- They are the most certain way to deal with high risks, especially the risk of environmental accidents. They remove the possibility that some operators may be prepared to take greater risks than others. They prescribe action which society expects and which is appropriate to the level of risk.
- The public may have more confidence in permitting and associated assessment of compliance as they can be perceived to be tougher, more visible, transparent and consistent than other instruments.

– Disadvantages

- Permit-based regimes tend to be expensive to administer compared to other regulatory instruments, both for the regulator and the regulated.
- They are relatively inflexible, requiring formal revision should circumstances change. This makes them less useful for situations where economic or environmental conditions change quickly.

› Applicability

Direct regulation based on permitting can achieve a wide range of environmental objectives. It is particularly suited to addressing localised issues such as air, water and groundwater pollution, and controlling noise and odour. Direct regulation may also be required to underpin other instruments such as trading and voluntary agreements to ensure that participants at least meet a minimum level of performance, in effect a

> Taxes can be used effectively with other tools to create a balanced policy package which takes account of economic as well as environmental objectives.

Choice of instruments
Continued

backstop to prevent free riders. Trading schemes also require regulatory regimes to describe and prescribe the boundaries and mechanisms of operation.

Environmental taxes

Taxation can be an alternative or complement to conventional regulatory instruments. It can be a relatively simple way of sending broad price signals aimed at achieving fairly widespread changes in behaviour, as with the Landfill Tax or Climate Change Levy.

Taxes can be used effectively with other tools to create a balanced policy package which takes account of economic as well as environmental objectives. They can be designed not to raise money for the government; for example revenues can be recycled to support specific environmental objectives such as investment in cleaner technologies, or to reward better performers.

+ Advantages

- Taxes promote innovation by giving firms financial incentives to change behaviour.
- Taxes can apply widely and can reach small and medium sized enterprises (SMEs) and individuals that are difficult and costly to regulate by other means.
- They can bring the environment into the boardroom by making it a real cost (even if the charge is does not raise money at a national level) and raise awareness more broadly.

– Disadvantages

- Taxation is a relatively blunt instrument and may only result in modest environmental improvements.
- A tax in itself does not guarantee a positive environmental outcome.
- Long lead times and high rates may be needed before prices affect behaviour.
- Taxation may result in undesirable side-effects, for example, unscrupulous operators fly-tipping to avoid the landfill tax.

› Applicability

Taxation is most appropriate where the target sector can switch to alternative, readily available, less polluting practices or goods. It works best when relatively modest price signals will have a significant impact on the market, and

> Trading can provide a least-cost solution to achieving environmental objectives because participants have the flexibility to make improvements when and where they decide.

when simple, broadly applicable rules can be applied, avoiding multiple exemptions, discounts or special provisions.

Trading schemes

Schemes which allow trading of emissions, waste or resources can deliver environmental objectives at lower cost than alternative approaches such as traditional permit-based regulation. Trading can be applied to a variety of situations, from individual pollutants such as nitrogen oxides, to resources such as water, or to address waste management. In the UK we already have a trading scheme for greenhouse gas emissions and there are plans for trading biodegradable municipal waste, oxides of nitrogen (NOx) and sulphur dioxide from power stations, and water abstraction rights.

Trading schemes need to be carefully tailored to suit the particular environmental objectives and circumstances. They may need to be supported by a permit scheme to ensure protection of the local environment.

There are different designs, but typically a scheme might consist of the following elements:

- a binding target such as a cap on total emissions or resources
- a clear unit of trade such as 1 tonne of NOx, 1 tonne of waste
- a system for distributing initial allowances to participants in the scheme
- a penalty system for non-compliance
- a specific compliance period, for example a year.

At the end of the compliance period, participants must hold sufficient allowances to cover their emissions or resources used within the period, or a non-compliance penalty will be charged. Participants covered by the scheme can choose either to operate within their allowance by reducing emissions (or resource use), to buy extra allowances in the market to cover any excess above their initial allowance, or to sell surplus allowances. They therefore have greater flexibility to choose which is the most cost-effective option.

Such a scheme achieves the environmental objective because collectively the participants must meet the overall cap, which is the sum of the initial allocations. The cap can be reduced over a defined period of time to achieve a progressive reduction although it is important that participants are given as much notice as possible of any reductions.

Choice of instruments
Continued

The Environment Agency's role in trading schemes is to advise government on the scheme design, to be responsible for some or all of the operational aspects such as assessing compliance, or be the lead organisation responsible for the effective operation of the scheme.

+ Advantages

- Trading can provide a least-cost solution to achieving environmental objectives because participants have the flexibility to make improvements when and where they decide. That should mean that those who can make improvements at lowest cost will do most, selling surplus allowances to firms where the control costs are higher.
- Trading means companies have more options and can choose how to optimise costs and benefits across their business portfolio, which is not possible with most instruments.
- Trading provides cost incentives to participants who employ cleaner technologies, because they will be able to sell surplus allowances. This can help to offset investment costs and may give firms with lower environmental impacts a competitive advantage.

– Disadvantages

- There are potential risks of anti-competitive behaviour or market domination that need to be carefully considered in the design, especially in how the allowances are distributed.
- Trading may be less suitable for smaller businesses, where lack of information and resources can be barriers to optimising trading decisions.

› Applicability

Trading is appropriate where there is a range of options to achieve environmental improvement, at a range of costs so that operators are able to choose the best option for their situation. It is most suitable for environmental objectives that are global in impact, such as greenhouse gas emissions.

Schemes require the traded item to be measurable, for example, resource use or emission. This allows the validation of initial allocations and subsequently reported data.

Trading is particularly effective where there is high 'liquidity' – a relatively large number and diversity of participants who want to trade – although a scheme can still work when there are only a small number of bilateral trades.

> "Negotiated or voluntary agreements can achieve higher commitment from the parties involved than an imposed requirement."

Negotiated or voluntary agreements

Businesses sometimes jointly agree action without legislation – usually to avoid the threat of legislation or regulation. For example the motor industry has agreed with the European Union emission reduction targets, the chemical industry in the UK has committed to achieve certain environmental targets, and there is a voluntary agreement on the use of pesticides. Such agreements are called 'voluntary' or 'negotiated'. They cover action in pursuit of stated environmental objectives which goes beyond the requirements of the regulator or the law. The regulator may be involved in monitoring progress, especially if regulatory action will be taken if the voluntary agreement fails to deliver the required improvement.

+ Advantages

- Negotiated or voluntary agreements can achieve higher commitment from the parties involved than an imposed requirement.
- They can be good for negotiating enhancements above a legislative minimum.
- They can secure early buy-in before formal regulation is required.

– Disadvantages

- They are not usually appropriate for managing serious risks.
- For sectors where there are many smaller businesses, considerable resources may be required to set up the agreement and there may be significant difficulties in communication and enforcement.
- They are unlikely to be successful unless effective penalties are in place to deal with under performance.

› Applicability

The traditional view is that such agreements are suitable in industries where a small number of relatively major companies able to improve their performance agree to achieve a small number of clearly identifiable outcomes. The voluntary initiative in the farming industry on the disposal of pesticides is a good example of how agreements can work in a wider setting. The trade-off in the form of lighter touch regulation, would be lost, if the agreement is not delivered and regulation may be required. This adds to the motivation to achieve the targets in the negotiated agreement.

> Education and advice are important especially for new initiatives, or where direct regulation does not apply, and when the target audience is very diffuse.

Choice of instruments
Continued

Education and advice

Businesses and individuals need to be more aware of how their actions impact on the environment and human health. Education and advice can help raise awareness of the issues through providing clear information, demonstrating potential improvements including cost savings through case studies, and highlighting national, regional or sectoral initiatives targeted at specific areas. We also need to promote regulatory requirements so that businesses and individuals are aware of their responsibilities and the consequences of failing to meet them.

In many cases the Environment Agency will work with other organisations and trade bodies to develop and promote information and educational materials. For example NetRegs helps small and medium sized businesses navigate environmental requirements.

This approach can be particularly effective for managing resources. For example, the Environment Agency uses a twin track approach to managing and allocating water resources, both developing new resources and encouraging demand-side management through efficiency measures and leakage reduction targets.

+ Advantages

- Education programmes are flexible tools, which can be developed to address issues as they arise.
- Programmes can involve two-way communications, resulting in sharing of knowledge between business and the regulator.
- Many small and medium sized enterprises (SMEs) and most individuals are not subject to direct regulation, so educational programmes may be one of the few ways of influencing their behaviour.

– Disadvantages

- To be effective, programmes may require substantial resources.
- Initiatives can raise expectations of further input by the regulator rather than building individual or business ownership of the issues.

> The Environment Agency expects to see businesses consistently complying with regulation.

› Applicability

Education and advice are important, especially for new initiatives, or where direct regulation does not apply, and when the target audience is very diffuse, for example small businesses or individuals such as fishermen. Education is also important where there are sector-specific issues that are quite different to the general situation, for example a specific waste stream such as fridge disposal.

› We provide advice to other regulators for example, our planning liaison function advises local authorities on potential flood risk. Our website advice and information about flooding targets individuals particularly those at risk of flooding. Our flood warnings are updated every 15 minutes and are available on line and via our telephone ‘floodline’. ■

Our model of modern regulation

Compliance assessment and enforcement

The purpose of regulation is to protect and improve the environment. We incorporate these requirements in permits. We need effective ways of assessing whether that has happened. For example, we may need to assess compliance with conditions included in a permit, or with the terms of a trading scheme or a negotiated agreement. Assessing the effectiveness of Environmental Management Systems (EMS) will also be important in determining how much we can rely on them.

Assessment involves the scrutiny of data and information. This allows the regulator to check whether an operator is complying with regulatory requirements and to decide whether further action is required. In most situations a compliance assessment programme will include physical inspections or site visits, which may be pre-arranged or unannounced, sometimes in response to an incident or a complaint. As well as assessing specific data, we review operators’ procedures and monitor the progress of improvement programmes. As far as possible we will gather data electronically to minimise bureaucracy and cost.

The resources for compliance assessment will be allocated on the basis of risk, which includes management and operating performance, complexity of the activity, environmental impact and location. Compliance assessment will involve the appropriate mix of:

Compliance assessment and enforcement
Continued

- site visits, audits and review of procedures
- scrutiny of reports, monitoring data and progress of improvement programmes
- check-monitoring
- responding to incidents and complaints.

It is the responsibility of operators to comply with legal requirements and for us to assess whether they are complying. But the Environment Agency must be careful to maintain a clear distinction between its regulatory role and the site management process.

Operators have to earn the right to lower levels of regulatory attention through good management of a site or activity. Compliance assessment takes into account management systems as well as environmental performance. Non-compliance should be taken as a symptom of poor management, not just poor performance.

Our efforts are focused on correcting poor performance to achieve the required environmental improvement and protection, and improved management systems and practices which will ensure that improvements are maintained.

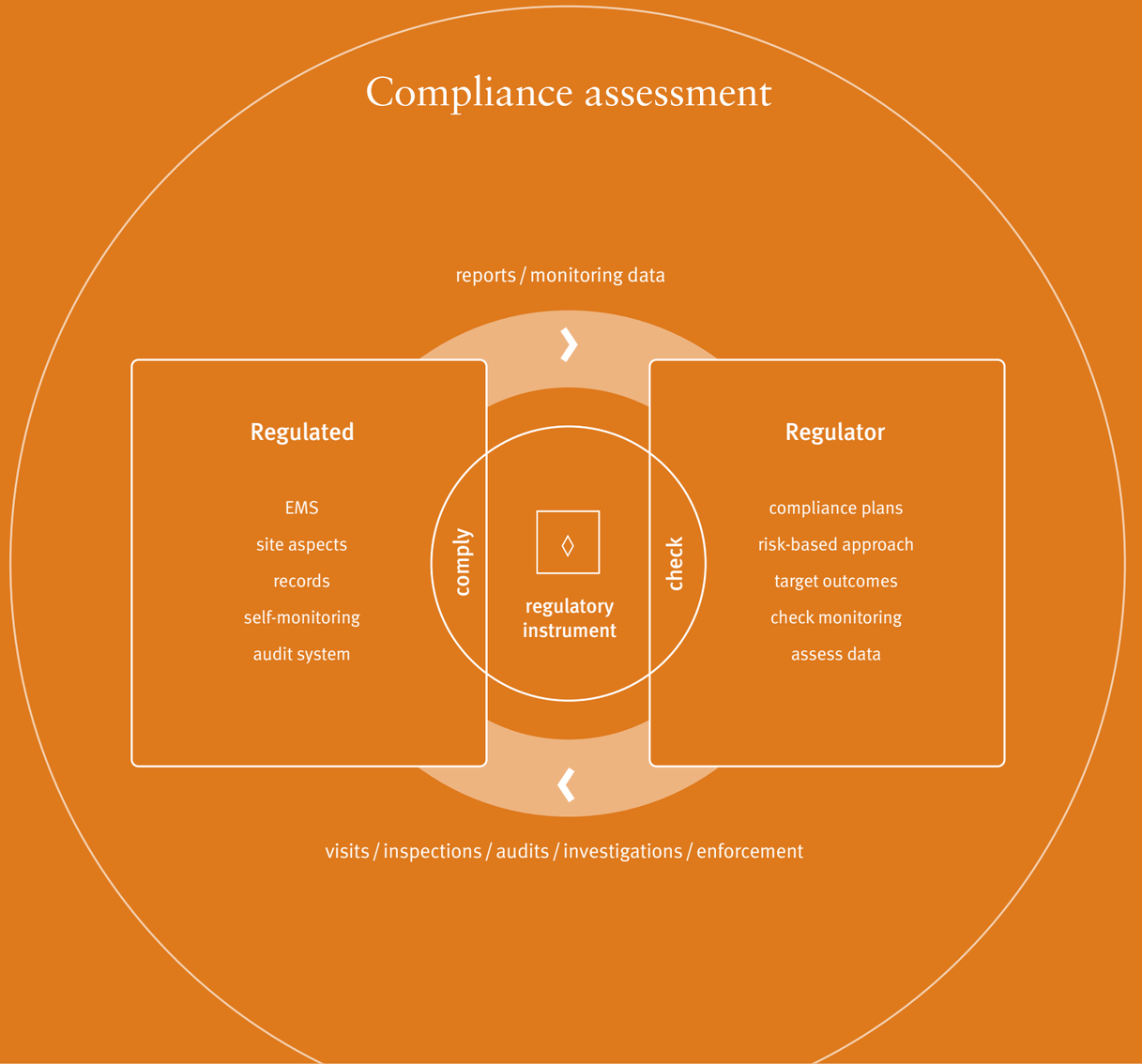
The purpose of a site inspection is to identify items which indicate system or process failures for subsequent audit or review and issues not covered by the existing permit that should be incorporated. It is also to ensure that no activities are carried out that should not be and to identify potential weaknesses in environmental control measures. Inspection can also include emissions sampling and checking compliance with permit conditions that can be identified by the senses, e.g. noise, odour, litter.

The essence of compliance assessment is to check performance against specified requirements. In complex situations it can require considerable interpretation and judgement. We also periodically review overall environmental performance of a site or of an activity to identify areas for further improvement.

Assessing compliance with permit conditions

The Environment Agency targets its resources on activities and operators where risks are higher because control measures and management practices are poor, but we ensure that we allocate appropriate levels of resources to all sites and activities. This means:

- ensuring that compliance assessment activities relate to national, sector and local objectives and priorities
- matching compliance assessment effort to the performance of those regulated and the level of environmental risk
- focusing on how the site or activity is managed, recognising self-monitoring or independent third party assessment where appropriate
- recognising that pre-arranged, reactive and unannounced site visits are important but only as part of the overall compliance assessment approach
- using occasional, in-depth audits
- developing charging mechanisms which reflect the extra resources needed to deal with poor performers.



> Operators have to earn the right to lower levels of regulatory attention through good management.

Compliance assessment and enforcement
Continued

Environmental management systems

The Environment Agency expects to see business consistently complying with regulation. We think environmental management systems (EMS) help to improve the management of environmental risks from a site or activity. This will reduce their risk (OPRA) profile which will be reflected in charging and compliance assessment planning. Our approach at any site will always be informed by observed standards of environmental protection and management. We are leading a major European research project, *remas*, that aims to show how management systems can lead to better performance.

+ Advantages

- Businesses take responsibility for the environmental impacts of their activities.
- An effective EMS should be part of an organisation's culture so that environmental responsibility becomes built in rather than a bolt on.
- They can result in lighter touch regulation where environmental performance is consistently to the required standard.
- Businesses that actively manage their environmental impacts can, in some circumstances, deliver cost savings from waste and resource use minimisation and can avoid the cost associated with pollution incidents.

– Disadvantages

- As EMS are voluntary, standards cannot necessarily be guaranteed, although failures may be detected by external assessments as well as by the Environment Agency's continued scrutiny of environmental performance.
- Assessors do not always operate to the same standards.
- Smaller companies may not have adequate resources to implement and maintain a certified EMS, but simplified versions may be appropriate such as Acorn an environmental management systems for SMEs.
- Failure of a company's EMS could undermine public confidence and result in a need for even greater resources than previously required.

› Applicability

Robust environmental management systems can be used throughout the regulatory cycle, to demonstrate that they know what regulations require of it, that it has assessed its performance against this, that environmental monitoring has been undertaken to a required standard, and to validate data which we use. If the Environment Agency can rely on a continuing high level of environmental management and compliance with legislative requirements we can plan to employ lower levels of resources, for example lowering the frequency of our independent checks. A robust EMS can also drive improvements that may not be directly covered in permit conditions, such as procurement and product lifecycle issues.

Compliance assessment tools

The Environment Agency has developed tools which we are progressively introducing to help it assess risks so it can allocate resources effectively. These include Compliance Assessment Plans (CAPs), Operator Pollution Risk Appraisal (OPRA) and the Compliance Classification Scheme (CCS).

CAPs are used to ensure that compliance against all requirements of permits and other regulatory approaches are checked within a defined period. They also identify the types of compliance assessment activity required and the level of resources that we will assign to these tasks. OPRA is a multi-attribute risk-screening tool that we use to prioritise and target our regulatory effort and to assign the appropriate level of charges for regulatory activities.

CCS classifies non-compliance with permit conditions according to the potential impact on the environment. It provides a consistent means of escalating action if companies consistently breach their permit and it can be used to help direct resources where we identify risks.

The key factors in deciding the level and nature of compliance assessment are:

- the risks in terms of the complexity of a site or activities, the potential for environmental impact given the location and management performance record;
- high levels of public concern about a particular activity which is likely to require higher regulatory involvement.

“The role of the operator is to make monitoring information publicly available. Such openness helps build trust.”

“Where businesses and individuals do not comply with legislation the Environment Agency will use its enforcement powers, firmly and fairly, to prevent pollution or environmental damage or to require remedial action to protect the environment. Where required we will prosecute.”

Compliance assessment and enforcement
Continued

Monitoring

The Environment Agency monitors many activities, which potentially impact on the environment, so that we can assess the risk of adverse effects. We are mainly concerned with emissions to air and water, water resources, waste management and the environmental quality of air, water (surface and groundwater) and land. We then use this information to decide if further action is required to protect and improve the environment.

The role of the operator is to:

- carry out monitoring and analysis to an appropriate, quality-assured standard
- assess and act upon the results as part of their own management system
- make monitoring information publicly available (online in real time where appropriate). This should include both measured emissions and visual data (for example litter from landfills). Such openness and transparency help to engender trust.

The role of the regulator is to:

- specify the standards against which monitoring should be carried out, using internationally agreed standards where they exist (for example CEN, The European Committee for Standardisation)
- ensure that operators monitor performance properly, by checking results, auditing the process and carrying out check monitoring
- act upon the results in a proportionate manner
- publish information so that the public can see how operators are performing [see appendix: information sources].

Businesses should also take responsibility for ensuring they are not having an adverse impact on the environment or people. This may include monitoring of the environment beyond a site boundary.

Regulators must be able to have confidence in the accuracy and reliability of operators' self-monitoring. We use an Operator Management Assessment (OMA) tool to assess the quality and management of monitoring processes and to identify areas for improvement.

Independent certification can deliver greater confidence in the equipment and methods used and as a consequence the results obtained. We have developed a monitoring and certification scheme called MCERTS, which provides a quality assurance system for providers of monitoring services, equipment and systems.

Enforcement

Regulatory regimes should include penalties or incentives that act as effective deterrents to non-compliance. But where businesses and individuals do not comply with legislation we will use our enforcement powers, firmly and fairly, to prevent pollution or environmental damage or to require remedial action to protect the environment. Where required we will prosecute.

Action includes:

- legal action such as prosecutions
- legislation should allow us to recover the costs of remedial work. The Environment Agency will always seek to recover the full costs incurred from those responsible for environmental damage
- for the future economic sanctions such as automatic fines or taking away incentive monies are being considered.

Action specifically within permitting regimes includes:

- warning letters, formal cautions
- enforcement notices
- prohibition notices, where there is an imminent risk of serious environmental damage or harm to human health
- suspension or revocation of permissions
- modification of permit conditions.

Within permitting regimes the Environment Agency makes sure that it does not set conditions which it is not prepared to enforce.

It is also important to record and analyse incidents to identify patterns of non-compliance at a site and sector level which we can use to identify risks and target prevention. We classify and record such incidents using our Compliance Classification System and the Common Incident Classification Scheme. To assist in this process we believe regulators should set out transparently when they will and will not take enforcement action including prosecution. We have published our enforcement and prosecution policy on our web site: **www.environment-agency.gov.uk**

> We encourage individual businesses to make information on their environmental performance accessible to their stakeholders, including neighbouring communities and investors.

Our model of modern regulation

Evaluation and information

Evaluation is an essential part of the regulatory process, providing feedback on all aspects of our work. In particular, it ensures that we learn from experience and are able to adapt in the light of new information.

Information

We use communication tools such as our Pollution Inventory and *Spotlight on business environmental performance* to provide information about environmental performance to a wide audience. We update them annually and are available on our website.

Analysis of the data enables us to monitor trends and feed back into the process and to identify areas and activities that need further investigation and evaluation.

For example, our National Customer Contact Centre (NCCC) (launched 1 April 2004) provides consistency in the way enquiries are handled. The NCCC is now handling over 4,500 calls per day, with 50 – 60 % of enquiries being resolved immediately. ■

We also encourage individual businesses to make information on their environmental performance accessible to their stakeholders, including neighbouring communities and investors, for example in the form of regular environmental reporting. We will make information on business environmental performance and our performance as a regulator widely available. Transparency and trust are vital components of our relationship with local communities, business and other regulators. Companies may also take the opportunity to report positive actions taken to improve environmental performance. As far as possible, reports should be prepared to agreed standards, audited and verified. They should provide quantified information on the significant environmental risks and impacts at a site or activity level using robust performance indicators, and illustrate how environmental management fits into the context of overall business policy and objectives.

Measurement

Measuring performance of the regulator should contribute to a greater focus on the achievement of environmental outcomes. Although it is necessary to measure some routine activities, such as the number of inspection visits, it is important that these are not the sole or even primary measure, and that our focus on achieving environmental outcomes is made clear to the public.

The key performance indicators should be those associated with our primary objectives of reducing pollution and improving the state of the environment. For example:

- national/local air and water quality
- emissions to air and discharges to water
- waste production
- pollution incidents
- non-compliance with permit conditions
- odour and other complaints
- company performance parameters such as energy, emissions or waste/tonne of product including benchmarking with sectors
- number of sites affected by unsustainable water abstractions
- OPRA and OMA scores.

Feeding back to new legislation

The Environment Agency wants to make sure that any new legislation, including that based on European Directives, fits the model of modern regulation it has outlined here. We aim to work with defra at the European level. We believe new legislation should be designed so that we can focus on outcomes and risk rather than regulatory procedures.

Legislation should:

- be subject to a Regulatory Impact Assessment (RIA) which defines and quantifies the environmental benefits and the costs, and demonstrates that the requirements are reasonable
- consider sources of funding, aiming for regulatory activities to pay for themselves and for the polluter to pay unless the administrative cost of collecting small charges is disproportionate.

When developing systems to introduce new legislation or reassessing how to deliver the outcomes from existing regimes, the approaches developed should be informed by RIAs and use the most cost effective regulatory instrument or combination of instruments, taking into account the desired outcomes and the risks.

Conclusion

Modern regulation focuses on outcomes and aims to achieve them in the most effective way. That means using the most appropriate instruments and putting a greater priority on higher risks, while applying fewer resources where the risks are lower.

Society demands high environmental standards. It also expects companies to behave responsibly, complying with and even exceeding legal requirements without constant supervision and the threat of enforcement action. The business world rightly expects greater regulatory efficiency so that compliance costs are kept to a minimum.

These potentially conflicting demands can be met with a regulatory regime that helps businesses and individuals to improve, rewards good performers but is tough on those who do not meet acceptable standards.

Applying the right approach is essential to achieving environmental objectives efficiently and effectively. Direct regulation of the kind which has traditionally been used to control abstractions from, and emissions to the environment will continue to have an important role – but will become smarter through the appropriate use of risk based approaches, greater standardisation, associated charging mechanisms, environmental taxes, trading schemes, negotiated agreements and education programmes.

There are important implications for all involved in the regulatory process.

- **Legislators** need to be smart in devising laws and use the full range of policy instruments which will achieve their aims while allowing flexibility in the regulator's approach.
- **Businesses and individuals** need to take full responsibility for delivering consistent compliance.
- **Regulators** need to use the flexibility allowed by the legislative framework to deliver the required environmental objectives in the most efficient and effective manner.

“ Potentially conflicting demands can be met with a regulatory regime that helps businesses and individuals to improve, rewards good performers but is tough on those who do not meet acceptable standards. ”

Glossary
This annex explains the use of the following terms in an Environment Agency context

Audit
Audit is an objective evaluation of the ability of an operator (including where present its management system) to achieve full compliance.

CAP
A Compliance Assessment Plan is used to ensure that within a defined period compliance is checked against all requirements of the permit and other relevant regulatory requirements.
A Compliance Assessment Plan can be developed at the site or sector level and will identify the level of resources to be assigned to the various compliance assessment activities (currently being developed).

CCS
The Compliance Classification Scheme is used to classify non-compliance with permit conditions according to the potential impact on the environment. The scheme helps track repeated breaches and provides a consistent means of escalating the action taken through links to the Agency's enforcement and prosecution policy.

CICS
The Common Incident Classification Scheme is used to classify different types of pollution incidents by environmental risk.

Compliance
This is defined as 'no evidence of failure to meet the permit (or other) conditions'. An operator is assumed to be compliant between inspections unless there is evidence to the contrary.

Compliance assessment
This is the overall approach taken to check compliance with all the conditions of a permit or other regulatory instrument.

Direct regulation
Regulation by means of a permit issued by a regulator or requirement written directly in legislation.

Enforcement
Enforcement action is taken by a regulator to ensure an activity that is non-compliant returns to compliance.

MCERTS
The Monitoring Certification Scheme is a quality assurance scheme for providers of monitoring services, equipment and systems, that is administered by the Environment Agency and accredited by UKAS.

Monitoring
This may be measurement of direct emissions into or abstractions from the environment, as well as the impacts of those emissions and abstractions.

OMA
Operator Management Assessment is a tool used to assess the quality and management of operator self-monitoring processes and identify areas for improvement.

OPRA
Operator Pollution Risk Appraisal is a multi-attribute risk assessment tool developed by the Environment Agency to determine the environmental hazards associated with a site and how well they are being managed. Future Environment Agency OPRA systems will be based on an assessment of a site's emissions, location, complexity and recent operator performance. OPRA allows the targeting of regulatory effort. It supports the polluter pays principle and through a cost recovery charging framework can provide a financial incentive to operators to reduce their environmental risks.

Permit
Permit is used to mean any documented set of criteria issued by a regulator or set down in regulations that require a site or activity to operate in a particular way.

Regulation
All aspects of the work carried out by the regulators to achieve the environmental outcomes they require. It is wider than Direct Regulation and includes market-based instruments, education, and negotiated and voluntary agreements.

Regulatory instrument
Regulatory instruments cover the full range of mechanisms that can be used to deliver environmental objectives. It implies any instrument that is used to make an intervention to protect or enhance the environment.

Sector plan
A sector plan sets out the environmental outcomes and targets, and the strategy to achieve them, for a defined group of activities over a designated period of time.

Self-monitoring
Monitoring that is carried out by or on behalf of a business, as distinct from that carried out on behalf of the regulator (e.g. check monitoring).

Appendix
Information sources

Spotlight on business environmental performance
www.environment-agency.gov.uk/spotlight

What's in your backyard
www.environment-agency.gov.uk/wiyby

Pollution inventory
www.environment-agency.gov.uk/pi

OMA
www.environment-agency.gov.uk/business/444217/444661/444671/466158/monitoring/techoma/199726

NetRegs
www.netregs.gov.uk

Remas
www.remas.info